

Translation

PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY  
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference CPGNA30547		FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/CN03/00609	International filing date (day/month/year) 29.Jul.2003(29.07.2003)	Priority date (day/month/year) 02.Aug.2002(02.08.2002)	
International Patent Classification (IPC) or national classification and IPC C07D 475/14 A61K 31/525 A61P 1/02, 1/04, 9/10, 9/12, 17/02, 19/02			
Applicant THE INSTITUTE OF RADIATION MEDICINE, ACADEMY OF MILITARY MEDICAL SCIENCES, PEOPLE'S LIBERATION ARMY, ET AL			
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>4</u> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> (sent to the applicant and to the International Bureau) a total of <u>11</u> sheets, as follows:</p> <p><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>			
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input checked="" type="checkbox"/> Box No. VIII Certain observations on the international application</p>			
Date of submission of the demand 29.Jul.2003(29.07.2003)		Date of completion of this report 22.Jun.2004(22.06.2004)	
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## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.  
PCT/CN03/00609

## Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
- ☐ publication of the international application (under Rule 12.4)
- ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages \_\_\_\_\_ as originally filed/furnished
- pages \* 1-9 \_\_\_\_\_ received by this Authority on 08.May.2004(08.05.2004)
- pages \* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☒ the claims:
- pages \_\_\_\_\_ as originally filed/furnished
- pages \* \_\_\_\_\_ as amended (together with any statement) under Article 19
- pages \* 10-11 \_\_\_\_\_ received by this Authority on 08.May.2004(08.05.2004)
- pages \* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☒ the drawings:
- pages 1/2-2/2 \_\_\_\_\_ as originally filed/furnished
- pages \* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- pages \* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.  
PCT/CN03/00609**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement:**

Novelty (N)	Claims	1-12	YES
	Claims	NONE	NO
Inventive step (IS)	Claims	1-12	YES
	Claims	NONE	NO
Industrial applicability (IA)	Claims	1-12	YES
	Claims	NONE	NO

**2. Citations and explanations (Rule 70.7)**

claims 1 and 2 relate to riboflavin derivatives, claim 3 relates to riboflavin-5'-laurate, claims 4-5 relate to the processes for the preparation of riboflavin-5'-laurate, claims 6-8 relate to the oil suspended preparations of riboflavin-5'-laurate, claims 9-12 relate to the uses of riboflavin derivatives. The prior arts didn't describe the compounds of the present invention and their uses such as being applied for assistant treating dermatitis, mouth or enteron catarrh caused by bone marrow replanting in treating leucocythemia, chemotherapeutics or actinotherapy in treating tumour. Therefore, the claims 1-12 meet PCT Article 33(2)-33(4).

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/CN03/00609

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

Claim 2 doesn't meet PCT Article 6 for the groups of  $R_1$ ,  $R_2$ ,  $R_3$  and  $R_4$  in the claim haven't been defined.